Massachusetts Maternal and Child Health 2010 Comprehensive Needs Assessment

Executive Summary (3/19/10 DRAFT)

The people served by the programs of Massachusetts Maternal and Child Health grant have experienced great changes in the last five years. To respond effectively to these changes, starting in mid-2009, the Massachusetts Department of Public Health (MDPH) has been conducting a systematic review of changes and needs in the state, led by the Title V Director, Ron Benham. A MDPH-wide Steering Group comprised of senior leaders from throughout the Department has overseen the project, which has included extensive internal and external stakeholder engagement. The complete 2010 Comprehensive Needs Assessment document will include supporting data, information gained from stakeholder engagement and details on each component of the needs assessment process. This executive summary outlines key findings and the resulting draft priorities for the MCH Block Grant 2011-2016 based on the assessment of ongoing needs in the state and significant changes seen in those needs over the last five years.

What Has Changed Since the Last Needs Assessment?

We have categorized these changes into seven domains that became apparent as we began our work on the comprehensive needs assessment for 2010. The full needs assessment document presents considerably more detail about each topic.

1. Massachusetts Health Care Reform

In 2007, the Commonwealth embarked upon a substantial overhaul of its health care system, to reduce the number of uninsured residents, estimated at about 8.5% of the state's population aged 65 years and under in 1998.[1] The legislature implemented a health insurance mandate with tax penalties and created the Commonwealth Health Insurance Connector Authority to link citizens with new and existing health plans that have varying levels of state subsidies, depending on members' income levels. By 2009, the Commonwealth decreased the proportion of the uninsured population 3% and the rate continues to decline. Among children aged 18 years and under, only 1.2% are uninsured.[2] Over 400,000 Massachusetts residents are newly insured with 150,000 having joined the newly created Commonwealth Care plans.[3]

While health insurance coverage is improving, a new bottleneck has emerged in the health system: access to primary care. Increasingly, too many people wait longer than six months for a physician appointment. In certain regions of the state, the number of primary care providers (PCPs) is insufficient to care for the population adequately, and many PCPs are not accepting new patients.[4] There are also substantial regional disparities in access to specialty care (e.g., Ob/GYN in western Massachusetts) and widespread problems with access to culturally competent care, especially for non-English speakers.

[1] Health Insurance Coverage in Massachusetts: Estimates from the 2008 Massachusetts Health Insurance Survey, updated March 2009
[2] Health Insurance Coverage in Massachusetts: Estimates from the 2008 Massachusetts Health Insurance Survey, updated March 2009
[3] Health Reform Facts and Figures, October 2009, https://www.mahealthconnector.org
[4] Office of Emergency Services, MA DPH, July 2009.

2. Economic conditions & projections

The second half of 2007 saw the start of a serious recession as the financial service sector declined across the nation. Throughout 2008 and 2009, the financial crisis had a substantial negative impact on corporate investment levels. In particular, unemployment rates reached historic highs in the US. Similarly, Massachusetts saw its own unemployment rate rise to over 9% by late 2009.[5] State revenue is down 10.9% from 2008.[6]

The severe recession has changed short-term behaviors and reduced long-term projections for the overall economy and subsequent state funds for public health. While it is too early to anticipate the long-term impact of the recession, the overall mood has become more conservative for both consumers and businesses. The state is experiencing higher demand for public health services even as state revenues to fund those services have and are likely either to continue to decline or to remain static for the foreseeable future.

3. Demographics

A few trends in Massachusetts demographics are worth highlighting:

- The state's overall population increased by 2.3% from 2000 to 2008[7]
- The foreign-born population (35% from Latin America) is increasing.[8] Massachusetts now ranks #8 in percentage foreign born among states.[9]
- An increasing percentage of births in Massachusetts are to minorities (32% in 2007 vs. 22% in 2000)[10]
- Thirty-nine percent of those living below 100% FPL are minorities. 41% of the Hispanic and 30% of the Black populations live below 100% FPL.
- Massachusetts continues to have a high cost of living and irregular distribution of income with the average household income 17% higher than the national[11] and 44% of the population living over 400% FPL.[12]

4. Health & Wellness Trends

Massachusetts residents overall enjoy better health care and health outcomes than US residents on average. For instance, in terms of infant death rate, breast feeding initiation, teen pregnancies, and birth weights, Massachusetts ranks high against other states (see table below).

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[5] U.S. Bureau of Labor Statistics (not seasonally adjusted)
[6] Dadayan, Lucy and Donald J. Boyd, "State Revenue Report", The Nelson A. Rockefeller Institute of Government, October 2009, No. 77
[7] U.S. Census Bureau, 2008 Population Estimates, MA Population Estimates Over Time, Table 1.
[8] U.S. Census Bureau, 2005-2007 American Community Survey 3-Year Estimates, Selected Social Characteristics in MA and Census 2000, Place of Birth by Citizenship Status, P21
[9] Pew Hispanic Center, Statistical Portrait of the Foreign-born Population in the US, 2007, Table 10: Foreign Born, by State, 2007. (#1 is highest)
[10] Massachusetts Births 2007. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Research and Epidemiology Program. Boston: Massachusetts Department of Public Health; 2009.
[11] U.S. Census Bureau, Current Population Survey, 2006 to 2008 Annual Social and Economic Supplements. Three-Year-Average Median Household Income by State: 2006-2008
[12] Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2008 and 2009 Current Population Survey (CPS: Annual Social and Economic Supplements).

Yet we also have substantial racial, ethnic, and geographic health disparities, and we fall short of national averages in several critical areas. Infant mortality rates have ceased improving since 2000. Low birth weight and prematurity rates have steadily worsened for the past decade, increasing the need for more special health and educational services. Massachusetts has also experienced increases in gestational diabetes mellitus (GDM) and cesarean deliveries.[13]

Indicator	MA 2000	MA 2007	% Change	US 2007*
Number of Births	81,582	77,934	-5%*	4,317,119(3)
% Foreign Born Mothers	20.8	27.2	+31%*	25 (4)
% Multiple Births	4.3	4.4	+2%	3.4 (1)
Teen Birth Rate (births/1000 women ages 15-19 years)	25.9	**22.0**	-15%*	42.5 (3)
Infant Mortality Rate (IMR) (deaths per 1,000 live births)	4.6	**4.9**	+6%	6.6 (1)
% Preterm (<37 weeks)	8.3	**9.0**	+8%*	12.7 (3)
% Low Birth Weight (<2,500 g, 5.5 lbs)	7.1	**7.9**	+11%*	8.2 (3)
% Smoking During Pregnancy	9.7	**7.5**	-23%*	13.1 (2)
% Cesarean Deliveries	23.4	33.7	+44%*	31.8 (3)
% Gestational Diabetes	2.8	4.2	+50%*	4.2 (1)

Bold are better than the National Average
*indicates statistical significance
(1) Massachusetts Births 2007. Boston, MA: Division of Research and Epidemiology, Bureau of Health Information, Statistics, Research and Evaluation, Massachusetts Department of Public Health. February 2009. NOTE: National Data on %Gestational Diabetes is from 2006.
(2) March of Dimes: Peristats data. "Births: Final data for 2006," National Vital Statistics Reports; Vol. 57, No. 7
(3) Births: Preliminary Data for 2007. National Vital Statistics report. March 18, 2009. Volume 57, Number 12. Accessed via http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57_12.pdf
(4) Child Trends analysis of 1990-2006 Natality MicroData Files, Centers for Disease Control and Prevention, National Center for Health Statistics. Accessed November 2009 via http://datacenter.kidscount.org/data/acrossstates/Rankings.aspx?ind=14.

The following are some highlights in areas critical for the long-term well-being of Massachusetts residents:

Obesity

- *All age groups have experienced an increasing prevalence of overweight and obesity.* More than half (57%) of Massachusetts adults are obese or overweight (53% of women).[14] Among children aged 2-17 years, 30% are obese or

[13] MDPH, Bureau of Health Information, Statistics, Research and Evaluation
[14] BRFSS, CDC. 2006-2008 3 Yr. Average Percentage for Adult Obesity.

overweight.[15] The proportion of births to mothers diagnosed with GDM increased by 49% between 2000 and 2007.[16]

Infant and Children's Health

- *Fetal deaths continue to account for more than half of the state's feto-infant mortality rate*. Rates are highest for Hispanics and Black Non-Hispanics[17]

- 10.3% of Massachusetts children have current asthma[18]
    - 50.9% of them had activity limitations due to asthma in the past year[19]
    - 65% of these children reported that their asthma was not well or very poorly controlled[20]

- Children aged 0-3 years have experienced increasing speech delays. The Early Intervention (EI) Program served 10% more children in 2008 compared with 2005. EI expenditures are up to $97M in 2008 vs. $80M in 2005[21]

- A nearly 40% increase in the number of autistic children in EI in Massachusetts from 2005 to 2008[22]

Violence and Injury

- *Injury is the leading cause of death among Massachusetts residents aged 1-44 years*. Most injury deaths in Massachusetts are unintentional (75% of all injury deaths were unintentional, 15% were suicide, 6% were homicide, and 4% were of undetermined intent, other, or adverse effects). Unintentional injuries resulting in death were predominantly due to auto accidents (#1 cause of death among youth aged 15-24 years accounting for 37% of deaths)[23]

- Among non-fatal unintentional injuries, falls were the leading cause of injury for all age groups under 14 years[24]

- Black males aged 15-24 years were 30 times more likely than White males to die from homicide[25] Black, non-Hispanics overall had a significantly higher injury death rate (59.1 per 100,000) than other races. For Black non-Hispanic residents age 0-19

[15] National Survey of Children's Health, 2003 and 2007. Overweight and Physical Activity Among Children: A Portrait of States and the Nation 2009, Health Resources and Services Administration, Maternal and Child Health Bureau.
[16] Massachusetts Births 2007. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Research and Epidemiology Program. Boston: Massachusetts Department of Public Health; 2009.
[17] Massachusetts Births 2007. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Research and Epidemiology Program. Boston: Massachusetts Department of Public Health; 2009.
[18] MA BRFSS 2005-2007
[19] MA Child Asthma Call-Back Survey 2006-2007
[20] MA Child Asthma Call-Back Survey 2006-2007
[21] Early Intervention: Program Review, October 2007
[22] Department of Public Health, Early Intervention: Program Review, October 2007
[23] MassCHIP Massachusetts Community Health Information Profile, 2007 Mortality (Vital Records) ICD-10 based
[24] MA Injury Surveillance Program - Injuries to Massachusetts Residents, 2006, published December 2008
[25] MassCHIP Massachusetts Community Health Information Profile, 2007 Mortality (Vital Records) ICD-10 based

years, injury deaths from firearms were more than twice as high as motor vehicle deaths.[26]

- Females (15%) report having experienced sexual violence at twice the rate of men (7%). Women with a disability (25%) were even more likely to have experienced sexual violence compared with women without disabilities (13%)[27]

- Violence is prevalent among youth and especially youth with special health care needs. More than 1 in 4 high school (HS) students has been involved in a physical fight and 15% of youth in each grade report bullying. Fifteen percent of high school females have been physically hurt by a date and 19% have had sexual contact against their will.

Mental Health

- *Massachusetts ranks 22nd nationally in reported poor mental health days.*[28] In 2008, 7% of Massachusetts adults reported 15+ days of feeling sad, blue, or depressed in the past month.[29] Among Massachusetts youth aged 12-17 years, 9% suffered an episode of major depression in the past year.[30]

- Suicide is the 3rd leading cause of death among youth aged 11-18 years.[31] Among high school students in Massachusetts during 2007, 24% reported feeling sad or hopeless enough to halt usual activity.[32] Just over ten percent report a suicide plan.[33] From 1999 to 2005, 3,018 suicide attempts in the state of Massachusetts resulted in death.[34]

- Postpartum depression affects women across different backgrounds with less than half seeking help. Ten percent of women surveyed by PRAMS reported they often or always experienced little interest in activities postpartum. Other, non-Hispanic women (17.9%), those under the age of 20 (13.5%), those with some college education (16.2%), those living at or below poverty level (16.8%), and non-US born mothers (14.9%) were most likely to report loss of pleasure or interest in activities. Further, among women indicating they felt depressed often or always, about 40% reported they sought help for depression.[35]

Infectious Disease

- *Rates of Chlamydia have increased since 2000.* Among youth aged 15-19 years, the overall incidence of Chlamydia is 1080 per 100,000. However, the rate is disproportionately high in Boston and Western Massachusetts (2,890 and 1,641 respectively)[36] compared to other regions.

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[26] Injuries to Massachusetts Children and Youth, 2002-2006, published January 2010
[27] BRFSS 2007
[28] America's Health Rankings™ http://www.americashealthrankings.org/yearcompare/2008/2009/MA.aspx
[29] A Profile of Health Among Massachusetts Adults, 2008: Results from the Behavioral Risk Factor Surveillance System
[30] National Survey on Drug Use and Health Promotion, 2007
[31] http://www.teenscreen.org/massachusetts-youth-mental-health-fact-sheet
[32] YRBS 2007
[33] YRBS 2007
[34] Centers for Disease Control and Prevention, 2005
[35] PRAMS 2007
[36] MassCHIP, BCDC STD Files: Chlamydia Region and Age Specific Rates per 100,000 for 2006

- While the rate of diagnosis of new HIV/AIDS cases is declining, the prevalence of HIV/AIDS increased 26.5% from 2000 to 2006, in part due to more effective treatments. New cases disproportionately affected Blacks and Hispanics and were concentrated in the city of Boston.[37]

Tobacco, Alcohol, and Drugs

- The number of women who reported smoking during pregnancy declined 60% (19.3% in 1990, 7.5% in 2007)[38]

- In 2007, 63.1% of Massachusetts women aged 18-44 years reported any use of alcohol (vs. 50.3% nationally) and 19.5% of those reported binge drinking (vs. 14% nationally).[39] In 2007, 11.5% of women reported alcohol use in the last 3 months of pregnancy[40]

- A substantial percentage of youth engage in high-risk behaviors
    - Twenty-eight percent of high school students reported binge drinking in the previous 30 days[41]
    - Nineteen percent of high school seniors have had four or more sex partners and more than 1/3rd of sexually active high school students did not use a condom at last sex.[42]
    - One in four high school students reported having ridden in a car in the past 30 days with someone who had been drinking.[43]

5. Knowledge and understanding of health and wellness

The last decade has seen tremendous advances in the understanding and practice of health care and public health. Public health interventions focus increasingly on policy change and environmental strategies to influence factors contributing to poor individual health outcomes and poor population health status. As this change in understanding naturally influences MDPH priorities, a few critical themes are as follows:

- Life course perspective[44] - Solely focusing on a disease or "body parts" Is not enough. Innovative health care takes an increasingly longitudinal perspective on one's life. What happens in one stage of a person's life affects outcomes in future stages and the next generation. Two key components of the life course model include understanding the pathways and trajectories that lead to a multitude of health outcomes and a focus on the impact of early programming or exposure to risk that may have long-term health consequences. This new understanding includes the following:
    - Social determinants of health including economic opportunity, community environment, and social factors experienced in early childhood, childhood, adolescence, and adulthood plus individual physical and mental health factors affect population health outcomes including mortality, morbidity, life expectancy, and quality of life.

[37] Massachusetts Department of Public Health, HIV/AIDS Surveillance System
[38] Massachusetts Births 2007. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Research and Epidemiology Program. Boston: Massachusetts Department of Public Health; 2009.
[39] MYRBS 2007
[40] PRAMS 2007
[41] MYRBS 2007
[42] MYRBS 2007
[43] MYRBS 2007
[44] Based on the work of Michael Lu and Neal Halfon

  - Maternal and family physical and mental health, practices, and living environment all affect an infant's health risk.
  - Early-childhood problems encountered and not addressed in formative years can have an impact on the person's future physical and mental health.
  - Life transition points (e.g. childhood to school, adolescence to adulthood, etc.) are sensitive periods of critical importance because of the number of changes that influence long-term health such as diet, activities, social network, built environment, and access to health care.
  - Life transitions, such as pregnancy and pre-pregnancy, offer critical teachable moments, where individuals confront significant change and are more open to guidance.
  - Certain populations will experience disproportionately adverse health outcomes based on differential access to resources and the presence of protective or risk factors that contribute to their health outcomes.

- Holistic perspective – Related to the life course perspective, we should view health as more than a series of acute health conditions or a particular disease. We should consider the individual in a holistic manner, and consider such factors as financial status, family situation, community ties, and the built environment.
  - Mental health and oral health have emerged as strong components of overall well-being.
  - Stress and depression correlate with poor health outcomes for mother, infant, and family.
  - There are cohorts of the population, particularly adolescents, that exhibit a higher overall risk profile and are more likely to engage in multiple high-risk behaviors including drug use, smoking, unprotected sex, multiple sexual partners, and unsafe driving.

- Health Equity – Disparities exist in health outcomes due to differential access to economic opportunities, community resources, and social factors. Economic opportunities may include adequate income, jobs, and educational opportunities. Community resources may include quality housing, quality schools, access to recreational facilities, access to healthy foods, transportation resources, access to health care, and a clean and safe environment. Social factors may include social network and support, leadership, political influence, organizational networks and racism. The role of public health is to establish public policy to achieve health equity and promote population based strategies which include:
  - Advocating for and defining public policy
  - Coordinating interagency efforts
  - Creating supportive environments to enable change
  - Collecting data, monitoring programs and conducting surveillance
  - Promoting population based interventions to address individual factors
  - Engaging with communities and building capacity

6. Learning and Influencing Behaviors

There is an important social component to learn new information or change existing behaviors. Advances in computing and electronic social media over the past several years have increased the opportunity to engage individuals and groups at a personal level. Additionally, MDPH will need to take advantage of new media to remain a leader in influencing health. Areas of special importance are:

- Segment specific marketing and emotional messaging – It is not enough to make people aware and provide education. Most people, for instance, know that they should lose weight and exercise more. Targeted marketing with emotional appeal is crucial to changing high-risk behaviors.

- Social networking – The Internet, especially social networking approaches, provides new avenues of public health outreach and engagement. In Massachusetts, 58% of women use the Internet regularly.[45] The fastest growing age groups using social networking sites, such as Facebook, are those above adolescence (largely because so many adolescents are already on it). Some MDPH programs have already seen success leveraging blogs and social networking sites.

- Essential Allies – MDPH connects to many people but certain individuals or groups have a disproportionate influence on the actions and policy decisions of others. Strategies need to include connecting with these groups and people to communicate messages and engage stakeholders. (Interviews with essential allies were an invaluable component of community outreach as part of the needs assessment process.)

7. New State Initiatives & Programs

In addition to the changes outlined above, Massachusetts rolled out several critical initiatives and programs in the last five years that inform have an impact on today's programs. Highlights include:

- Children's Behavioral Health Initiative to improve screening, assessment, and treatment of behavioral health issues for those covered by MassHealth.
- Governor's Readiness Project to build a comprehensive, child-centric education system.
- Massachusetts Early Childhood Comprehensive Systems (MECCS) project to integrate systems of care, health, and education for young children and their families.
- Mass-in-Motion comprehensive action initiative to help fight obesity through policy change and public education. The initiative includes new regulations requiring school-based BMI screenings and reporting, menu labeling of nutritional information in chain restaurants, social marketing campaigns, a website and blog, and grants to municipalities to promote broad-based policy changes to improve opportunities for healthy eating and increased physical activity. Mass in Motion also supports the active state legislative discussion on banning junk food in schools and encouraging access to healthy snack items.
- Massachusetts Partnership for a Healthy Weight catalyzes and supports initiatives that remove barriers and increase opportunities for healthy eating, active living, and routine screening for diagnosis and treatment of overweight and obese.

Priority Setting for Massachusetts

The MDPH Project Team, along with a Steering Group of senior health leaders and other stakeholders, underwent a comprehensive process to develop the ten draft MCH priorities for 2010 to 2015. The process included development of a comprehensive list of potential priorities for Massachusetts and then refinement through stakeholder engagement. *(See*

[45] Current Population Survey (October 2007), US Census Bureau

figure #1 Population Priority Concepts and figure #2 Infrastructure Capacity Priority Concepts)

Stakeholder engagement included several dozen internal and external interviews as well as multiple focus groups to develop and narrow potential priorities. These priorities included both previous MCHB priorities as well as new ideas emerging from the trends discussed above and the knowledge of participants in the process.

The Project team first developed a list of principles to guide the prioritization process, using these eight principles:

- Promote health and well-being of MCH populations.
- Promote an understanding of the Life Course Perspective and the impact of the Social Determinants of Health within all programs.
- Promote continuity of care among all populations.
- Address health equity by targeting the increasingly diverse MCH populations in Massachusetts.
- Ensure community engagement through essential allies and others.
- Focus on family involvement, including fathers.
- Target interventions as early as possible and focus on teachable moments.
- Be nimble in awareness of and response to emerging trends, both fiscal and scientific.

The project team then applied a screening process that leveraged all available data and evidence, and incorporated the subjective points of views of stakeholders through surveys, interviews, and focus groups. The priorities reflect the knowledge gained from existing and past DPH programs and activities.

In simple terms, the team used a two-dimensional decision criterion:

1) What are the relevant factors affecting the likely impact?
2) What is the feasibility of success?

“Relevant Factors” included consideration of the number of people affected (incidence & prevalence); the degree of importance for quality of life and long-term outcomes; prevention based on current research or evidence; socio-economic, cultural, or geographic disparities; and whether actions based on the priority increase or enhance collaboration with other state and private agencies.

“Feasibility” included consideration of the level of DPH competency in subject matter; political and organizational will (internal and external champions); resource availability and relative cost; leadership vs. follower position for particular issues; relevance to the core mission of MCH and MDPH; availability of government and community partners; availability of resources to advance the work of MDPH; and presence of synergistic effect among multiple priorities (e.g., screening for mental health can include screening for substance use and domestic violence).

The Project Team assessed all priority concepts from the interviews and focus groups using these criteria and all available data to support evidenced-based decision making to the extent possible. The Team then conducted a more detailed evaluation to determine where priorities fell along the life course continuum, favor priorities that translate into services or systems change, and focus on priorities that broadly cover MCH populations. To accomplish this task, both the Project Team and the Steering Group spent many hours brainstorming

and reviewing data. External research, including surveys, key-opinion-leader interviews and focus groups, supported the prioritization process and influenced the relative importance of the priorities.

Based on this evaluation, the Project Team identified a preliminary shorter list of 22 potential priorities (presented below) from which ten would emerge as the MCH priorities for Massachusetts.

What are our priorities for the next 5 years?

Each of the priorities below includes a review of relevant factors and feasibility components to inform the decision process. In addition, the top ten priorities are marked in red with an asterisk.

Priorities focusing on all MCH populations:

*1. Promote Healthy Weight**

Relevant Factors

- Fifty-seven percent of residents are obese or overweight; (30% of children/youth are overweight)
- Obesity is associated with adverse short- and long-term health outcomes (diabetes, gestational diabetes, heart disease, etc.)
- Type 2 diabetes among youth aged 10-19 years increased disproportionately among minorities. – Non-White populations had more than twice the incidence of White populations
- Nearly every internal and external stakeholder interview mentioned obesity and several focused on the need for a coordinated approach vs. individual programs
- Potential Actions:
    - Develop a comprehensive healthy weight strategy across MDPH programs

Feasibility

- Political will exists and aligns with DPH Commissioner's Mass-in-Motion, Partnership for Health Weight, and core mission of the Title V agency. For example, significant legislation on healthy snacks in schools is currently under active discussion in the state legislature.
- Opportunity to leverage programs touches broad populations (WIC, EI, Essential School Health Services) and community resources
- Provides additional grant opportunities including American Recovery and Reinvestment Act (ARRA)

*2. Promote emotional wellness and social connectedness across the lifespan**

Relevant Factors

- Depression affects 31% of post-partum women[46]
- Among high school students in Massachusetts, 24% felt sad or hopeless enough to halt usual activity.[47] More than ten percent reported having a suicide plan.[48] Needs are more acute for CYSHCN.

[46] PRAMS 2007
[47] YRBS 2007
[48] YRBS 2007

- Mental health is associated with violence and the impact of bullying
- Mental health was a consistent theme in internal and external stakeholder interviews
- Actions:
    - Conduct broad based education, especially working with schools
    - Improve training and workforce capacity
    - Integrate mental health screening across programs

Feasibility

- MDPH may need to collaborate with Department of Mental Health services to provide guidance for screening and brief intervention
- Political now exists to combat bullying in schools as indicated by significant discussion on anti-bullying the Massachusetts Legislature.
- Actions overlap with obesity, substance abuse, and violence

*3. Coordinate preventive oral health measures and promote universal access to affordable dental care**

Relevant Factors

- Blacks and Hispanics in Massachusetts have much higher rates of tooth loss compared to Whites (49% and 47% compared to 24% respectively in 25-44 year olds with tooth loss)[49]
- Decay and caries correlate with poor adult dental health and non-White kindergarten children in Massachusetts have near two times higher prevalence of dental caries relative to White children.[50] Seventeen percent of the state's 3rd graders had untreated decay[51]
- Dental hygienists are not equally accessible across the state with many parts of Western Massachusetts underserved[52]
- Forty percent of hygienists do not have experience with special needs populations while CYSHCN are at greater risk for oral health problems[53]
- Actions:
    - Conduct nutrition education and oral health programs through intersection with schools
    - Leverage other programs (EI, WIC) to include oral health education

Feasibility

- DPH is a leader in oral health in the Commonwealth
- Oral health intersects with other infrastructure level development such as improving access to care for children and youth with special health care needs
- Builds upon the recommendations of *The Status of Oral Disease in Massachusetts: A Great Unmet Need 2009* report and the work of the Office of Oral Health

*4. Enhance screening for and prevention of violence and bullying**

Relevant Factors

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[49] DPH, Office of Oral Health

[50] White BA, Monopoli MP, Souza BS. Catalyst Institute The Oral Health of Massachusetts' Children January, 2008

[51] The Status of Oral Disease in Massachusetts: A Great Unmet Need, 2009

[52] MA Dental Hygienists' Survey, 2007

[53] Faine M. Nutrition issues and oral health. In: Proceedings from Promoting Oral Health of Children with Neurodevelopmental Disabilities and Other Special Health Care Needs. May 4-5, 2001; Center on Human Development and Disability, University of Washington, Seattle, WA

- Females (15%) report having experienced sexual violence at twice the rate of men (7%). Women with a disability (25%) were even more likely than women without a disability (13%) to report having experienced violence.[54]
- Black males aged 15-24 years were 30 times more likely than White males to die from homicide[55]
- The Sexual Assault Nurse Examiner (SANE) Program has higher conviction rates than physicians alone
- Violence occurs in multiple forms including bullying, community violence, violence against women, youth violence, and violence against infants (shaken baby syndrome)
- Actions:
    - Build upon success of SANE program
    - Build upon existing processes for screening and referral including those used by the WIC program
    - Collaborate with schools, community partners, and youth development programs to reduce male violence norms

Feasibility

- Political now exists to combat bullying in schools as indicated by significant discussion on anti-bullying the Massachusetts Legislature.
- MDPH is a leader in violence prevention efforts as violence is seen as a preventable public health issue
- Leverage existing programs (Safe Spaces, SANE, etc.)

*5. Support reproductive and sexual health by improving access to education and services**

Relevant Factors

- Almost thirty-three percent of high school youth reported being sexually active in the last three months[56]
- Almost thirty-nine percent of high school youth reported not using a condom during last sexual intercourse[57]
- Growing number of pregnancies occurring among women aged 45 years and older while this group also had the highest prevalence of use of reproductive assistance (29.6%)[58]
- Actions:
    - Encourage family planning approach to address teen pregnancy
    - Examine infant health and developmental outcomes of infants conceived with assisted reproductive technologies

Feasibility

- Broad support from the MCH Steering Group representing bureau leadership across MDPH
- MDPH program already intersect with target populations at key teachable moments: schools, programs for young children, programs for new mothers, etc.

[54] BRFSS 2007
[55] MassCHIP Massachusetts Community Health Information Profile, 2007 Mortality (Vital Records) ICD-10 based
[56] YRBS 2007
[57] YRBS 2007
[58] PRAMS 2007

Maternal Health

*6. Improve the health and well-being of women in their childbearing years**

Relevant Factors

- Fetal deaths continue to account for more than half of the state's feto-infant mortality rate
- Infant deaths have not shown much improvement in the past decade; infant and neonatal mortality has increased among Hispanic and Asian populations
- Racial disparities show that narrowing the gap between Whites, Blacks and Hispanics will improve birth outcomes overall
- Actions:
    - Increase education regarding preventable areas of preconception and prenatal risk and overall health risk by focusing on unhealthy behaviors (e.g., smoking) and chronic disease prevention and management
    - Increase education regarding pregnancy and risk in older women
    - Influence policy and licensing requirements that reduce systems barriers, such as access to care for low income individuals

Feasibility

- Intersects with general parenting education
- Direct programs already in place but could leverage other programs and relationships
- Efforts already underway to expand upon work of the child fatality review group and develop a review of infant mortality group to decrease the incidence of preventable infant deaths in Massachusetts.

Child/Adolescent

*7. Support effective transitions from (1) early childhood to school and (2) adolescence to adulthood**

Relevant Factors

- Only 46.6% of CYSHCN in Massachusetts met HRSA Core Outcome for transition[59]
- Transition is a critical moment in the preparation of all youth for adult life especially those transitioning into the workforce following high school. This includes developing skills for independent living and education on alcohol and drug use; healthy eating and physical activity; personal, financial, and health care management; living environment; employment and/or post secondary education; and health insurance.
- Transition was mentioned in most interviews especially among those individuals working with CYSHCN
- Transition was mentioned in most interviews especially among those individuals working with CYSHCN
- Actions:
    - Build a stronger relationship with schools.
    - Work with community groups to increase the age of 1st use of tobacco and alcohol

[59] U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children with Special Health Care Needs Chartbook 2005–2006. Rockville, Maryland: U.S. Department of Health and Human Services, 2008.

- Encourage family planning approach to address teen pregnancy

Feasibility
- Requires strong leadership and collaboration among and cooperation between state agencies
- Systems building role
  - Areas: awareness, planning, education
  - Actors: parents (incl. teen parents), providers, educators, other state agencies

*8. Expand medical home efforts to focus on systems building and securing access & funding for children and youth**

Relevant Factors
- Less than half (45.7%) of CYSHCN in Massachusetts met HRSA Core Outcome for medical home[60]
- Actions:
  - Promote awareness and understanding of the medical home concept through social marketing, newsletters and alerts across multiple institutions/programs that work with families across the lifespan including birth hospitals, EI, health care providers, schools, etc.
  - Expand DPH practice-based care coordination to strengthen and expand medical home model in medical practices
  - Demonstrate ongoing effectiveness of medical home for CYSHCN, their families and providers and expand to include all children
  - Strengthen capacity to train/mentor primary care providers to include medical home in their practices
  - Strengthen and improve collaborations with other state agencies, professional organizations (e.g., AAP) and insurers to promote medical home
  - Develop and disseminate standards and offer medical home certification to pediatric practices that implement these standards
  - Promote appropriate levels of reimbursement by insurers for strategies that support the medical home model
  - Support families in taking lead roles in pediatric practices to increase family involvement and promote medical home

Feasibility
- Medical home efforts have strong support within MDPH and champions in the community
- Medical home is a key component of creating a comprehensive service system, a goal that is identified in the mission of the CYSHCN Program

*9. Reduce unintentional injury and promote healthy behavior choices for adolescents**

Relevant Factors
- In 2007, 75% of all injury deaths were unintentional: 15% were suicide, 6% were homicide, and 4% were of undetermined intent, other, or adverse effects.

[60] U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children with Special Health Care Needs Chartbook 2005–2006. Rockville, Maryland: U.S. Department of Health and Human Services, 2008.

Unintentional injuries resulting in death for youth were predominantly due to auto accidents (#1 cause of death among youth aged 15-24 years accounting for 37% of deaths)[61]

- Among non-fatal unintentional injuries, falls were the leading cause of injury for all age groups under 14 years.[62]
- Actions:
    - Revise licensure criteria and improve education for safety around playgrounds, homes, and vehicles to decrease risks
    - Improve effectiveness of child fatality review process and safe home/safe sleep education

Feasibility

- MDPH will provide leadership in this area as unintentional injury is increasingly understood as a preventable public health issue

10. Promote healthy behavior choices for adolescents to reduce high-risk behaviors

Relevant Factors

- Approximately 1 in 5 adolescents engage in multiple risky behaviors that include motor vehicle risk, risky sexual behaviors, drug and alcohol use, and physical fighting. In 2007:
    - Twenty-eight percent of high school students reported binge drinking in the previous 30 days[63]
    - Twenty-seven percent of high school students reported being offered, sold, or given drugs at school[64]
- Reducing high risk behaviors may also reduce teen pregnancy rates and binge drinking influence on rates of fetal alcohol syndrome disorders
- Tobacco control shows clear opportunity for impact as rates of high school cigarette use and use before age 13 years have declined by 50% from 1995 to 2007.[65]
- Actions:
    - Employ a systemic approach to screening and intervention, including school collaboration

Feasibility

- Requires the coordination of the work of multiple bureaus (Bureau of Community Health Access and Promotion, Bureau of Substance Abuse Services, and many others)

11. Enhance care and care opportunities for infants and toddlers through taking a more active role in childcare standards and practices and advocating the positive influence of early childcare

Relevant Factors

- EI growth is surging because of increasing speech delay
- High quality childcare supports cognitive and language development

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[61] MassCHIP Massachusetts Community Health Information Profile, 2007 Mortality (Vital Records) ICD-10 based

[62] MA Injury Surveillance Program - Injuries to Massachusetts Residents, 2006, published December 2008

[63] "FASD: What Everyone Should Know (2006)", National Organization on Fetal Alcohol Syndrome

[64] MYRBS 2007

[65] MYRBS 1993-2007

- Massachusetts has more than two times the licensed preschool capacity for childcare than infant/toddler capacity (112,460 vs. 46,109, respectively)
- From the remarks in several interviews, there are fewer opportunities for social learning for infants and toddlers in our increasingly isolated society and public health may need to take a more active role in promoting developmental learning
- Actions:
    - Take a role in training and collaboration with early education
        - Setting standards and licensing
        - Changing public perception of childcare for children aged < 3 years

Feasibility
- MDPH can build upon efforts at the Department of Early Education and Care (EEC)
- Aligns with Governor's readiness agenda for public education

CYSHCN

12. Improve management of asthma in school-aged children through collaboration with schools and education of childcare providers

Relevant Factors
- More than ten percent of Massachusetts children have current asthma[66]
    - Almost sixty percent of them had activity limitations due to asthma in the past year[67]
    - Sixty-five percent of these children reported not well or very poorly controlled asthma[68]
- Asthma prevalence peaks in fourth and fifth grades
- Non-Hispanic Blacks have a 3.4 times higher age adjusted asthma death rate (all ages)[69]
- Actions:
    - Coordinate with schools
    - Conduct workforce training and educational messaging to childcare providers

Feasibility
- Improving the lives of children and families with special health care needs is core to the role of public health
- Builds upon school nurse program efforts

13. Broaden understanding of autism treatment and services to ensure youth with autism spectrum disorders (ASD) receive early treatment at the most appropriate level

Relevant Factors
- Prevalence of ASD among US children aged 3-17 years is 110 per 10,000 with an estimated 13,000 children aged <18 years in Massachusetts having ASD[70]

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[66] MA BRFSS 2005-2007
[67] MA Child Asthma Call-Back Survey 2006-2007
[68] MA Child Asthma Call-Back Survey 2006-2007
[69] 2000-2006 MA Registry of Vital Statistics
[70] Prevalence of Parent-Reported Diagnosis of Autism Spectrum Disorder Among Children in the US, 2007 (2009)

- The number of youth with ASD in EI tripled from 2000 to 2009[71]
- ASD can be identified early and managed, which improves functioning
- Actions:
    - Incorporate autism into broad training initiatives
    - Enhance screening through parent and childcare provider education

Feasibility
- ASD not consistently covered by insurance. Services are covered by EI and contribute to the significant recent increase in program costs

Capacity

14. Promote workforce capacity within the health sector including primary care providers, mental health providers, community health workers, and other specialists

Relevant Factors
- From the remarks in several interviews, involvement in education both improves understanding of issues and perception of the role of public health
- Actions:
    - Take a role in training and collaboration with education providers to inform new practitioners of public health issues in the state

Feasibility
- MDPH can build upon collaborations with the numerous teaching hospitals and close university ties
- Ties with the recommendations of the *Community Health Workers in Massachusetts: Improving Health Care and Public Health* Report of the Massachusetts Department of Public Health Community Health Worker Advisory Council

15. Integrate all Children and Youth with Special Health Care Needs (CYSHCN) programs into a holistic, easy-to-access service system to improve program access to care and reduce the burden on families

Relevant Factors
- Coordinated approach improves the scale of resources per participant especially for outreach and marketing
- CYSHCN programs are relatively small and focus on specific service areas allowing a coordinated approach to improve coverage for clients with multiple needs
- WIC provides an integrated service model where staff are key to making it a participant-centered program and WIC now has an 89% satisfaction rating
- Actions:
    - Three stage approach
        - Align internally
        - Bring in collaborators
        - Define the model for care (intersection with Medical Home)

Feasibility
- Builds upon the CYSHCN Program vision and mission and action team efforts to date

[71] Department of Public Health, Early Intervention: Program Review, October 2007

- Aligns with medical home efforts

16. Develop and apply a framework to reduce disparities targeting the increasingly diverse MCH populations in Massachusetts

Relevant Factors

- Massachusetts has differing health outcomes across racial, socioeconomic and geographic categories
- Disparities was a predominant topic across interviews
- Actions:
    - Incorporate CLAS standards into all programs
    - Build into provider contract goals to improve outreach to target populations

Feasibility

- Core to the mission of public health
- Build upon the efforts of the Office of Health Equity
- MDPH's largest programs have good penetration into many disparate populations in the state
- Resources, such as translation services, already exist to allow improvement
- Opportunity to leverage further links to community groups supporting target populations

17. Improve community engagement of MCH-serving programs through:

- ***Essential Allies/Advisory Boards***
- ***Priority Community Groups***
- ***Youth Development***
- ***School Engagement***

To leverage better community resources that work towards similar health outcomes

Relevant Factors

- MDPH can improve visibility in the community for all of its programs and increase understanding of the Title V agency's health priorities and recommended interventions
- Gaps exist in current services and programs
- Interviews revealed the potential to leverage existing contracts to build community engagement. Several programs offered models for engagement such as the Massachusetts Tobacco Cessation and Prevention Program.
- Actions:
    - Increase connection with essential allies
    - Create a pediatric provider community
    - Leverage provider contracts to increase engagement

Feasibility

- Individual programs are well connected already to their communities
- Regional offices, centers, and Community Health Network Areas (CHNAs) offer a starting point for change

18. Develop and implement an effective marketing/outreach strategy that:

- ***Provides optimal clarity on programs***
- ***Targets messages to specific segments***
- ***Leverages key "teachable moments"***
- ***Takes advantage of new media, especially the internet***

To increase responsiveness and improve educational capacity for current and emerging health issues across all populations

Relevant Factors

- New internet strategies are becoming more widely accessible by both low and high income populations
- MCH populations are at the intersection of multiple teachable moments
- New and more direct channels of communication have been successful for other programs
- Interviews yielded that public perception of MDPH doesn't include many of the programs and services covered by MCH – need to establish reputation as "protector" of public health
- Actions:
    - Build understanding of current population segments across programs
    - Engage with schools and community leaders to inform segmentation and identify teachable moments
    - Develop comprehensive web strategy

Feasibility

- On-line servicing in the private sector has shown costs are a fraction of the cost of direct contact
- Prior efforts and understanding can be leveraged to build understanding of segments for outreach. Many programs have experimented with web-based interactions and are looking for guidance
- Interviews revealed a variety of options to pursue

19. Improve data availability, access and analytical capacity*

Relevant Factors

- Improved DPH understanding of clients will improve marketing, service and outreach especially for clients shared by multiple programs
- Improved tracking of youth aged 3 years and older and potentially across generations
- Actions:
    - Continue use of data for performance-based management of programs, such as WIC and the Women's Health Network
    - Develop further original research supporting evidence-based policies

Feasibility

- Organizational will exists to improve use of data for policy and program development especially during the current period of constrained state resources
- Build upon existing data linkages (e.g., EI and the Pregnancy to Early Life Longitudinal (PELL) Data System) to show outcomes across program activities and increase longitudinal analysis of outcomes

20. Develop strategies to monitor and anticipate changes following the impact of national health reforms and Massachusetts health care reform on access to quality health care for all Massachusetts residents

Relevant Factors

- Increasing numbers of Massachusetts residents are now insured but changes to coverage have left some without needed services and others unable to afford previously available insurance

- Actions:
    - Collaborate with providers and community and state agencies to identify and inform best practices in the changing insurance environment

Feasibility

- Leverages role as a protector of public health
- Builds upon network of programs

21. Promote continuity of care and Life Course Model with an emphasis on social determinants of health to improve coordination of services across all MDPH programs across the lifespan

Relevant Factors

- Improves alignment of efforts of MCH and non-MCH programs since many programs sit outside the Title V agency's umbrella
- Actions:
    - Leverage needs assessment steering group to develop cross-agency workgroup to open the door to education and resolve alignment of frameworks

Feasibility

- Internal interviews revealed that most programs were using a strategic framework for planning that could be made consistent with the Life Course Model.

22. Enhance MDPH's ability to timely recognize and respond to emerging health issues to lessen the potential impact on maternal and infant health

Relevant Factors

- Natural disasters and economic crises are increasingly viewed as public health events
- Infectious diseases can emerge and spread quickly
- Women of childbearing age and young children are at special risk (such as for H1N1)
- Disproportionate impact on population sub-segments (STDs and adolescents/Boston/western Massachusetts; HIV and Blacks, Hispanics)
- Actions:
    - Improve means to communicate emerging health findings and raise the level of importance when necessary

Feasibility

- Opportunity to leverage contact with pregnant women and educate at teachable moments
- MDPH has a track record of success in this area
- Enhancement of recognition and action will help MDPH establish itself as a leader in the state
- MDPH is coming from a good position from the H1N1 response

In summary, the top ten priorities are (in no specific order):

Promote healthy weight
Promote emotional wellness and social connectedness across lifespan

Coordinate preventive measures and promote universal access to affordable dental care
Enhance screening for and prevention of violence and bullying
Improve the health and well-being of women in their childbearing years
Support effective transitions from (1) early childhood to school and (2) adolescence to adulthood
Reduce unintentional injury and promote healthy behavior choices for adolescents
Improve data availability, access and analytical capacity
Expand medical home efforts to systems building and securing access & funding for children and youth
Support reproductive and sexual health by improving access to education and services

How will we measure ourselves?

Each of the top ten priorities is measured annually against predefined national measures and agency-defined state measures. The following are the federally mandated measures that we will utilize:

National Performance Measures
NPM 1 - Screening & follow-up for metabolic disease
NPM 2 - CSHCN family partnership/satisfaction
NPM 3 - CSHCN with Medical Home
NPM 4 - CSHCN with adequate insurance
NPM 5 - CSHCN community systems ease of use
NPM 6 - Transition services for youth with SHCN
NPM 7 - Immunization
NPM 8 - Teen Births ages 15-17
NPM 9 - Dental Sealants
NPM 10 - Motor vehicle deaths ages 10-14
NPM 11 - Breastfeeding
NPM 12 - Newborn Hearing Screening
NPM 13 - Children without health insurance
NPM 14 - WIC child BMI over 85th percentile
NPM 15 - Smoking in last trimester
NPM 16 - Suicide deaths ages 15-19
NPM 17 - VLBW at facilities for high risk
NPM 18 - First trimester prenatal care

An additional ten State measures are currently being developed and will become an essential part of the Comprehensive Needs Assessment submission and annual progress reviews. The chart below includes the current ten draft priorities with a mapping to the relevant national measures and draft state measures. State measures can consist of direct measures that are indicative of overall efforts or state measures can be a scored composite of activities and accomplishments by MDPH.

Priority	Applicable National Measure	Draft State Measure
Promote healthy weight	• WIC BMI • Breastfeeding	• Composite measure of activities to reduce overweight and obesity
Promote emotional wellness and social connectedness across lifespan	• Suicide Deaths ages 15-19	• Composite measure of emotional wellness activities
Coordinate preventive measures and promote universal access to affordable dental care	• Dental Sealants	• TBD
Enhance screening for and prevention of violence and bullying	• N/A	• % of women reporting that a health care provider during any prenatal visit(s) talked about physical abuse to women by their husbands or partners
Improve the health and well-being of women in their childbearing years	• WIC BMI • Breastfeeding • Teen Births ages 15-17 • Smoking in last trimester • First trimester prenatal care • VLBW at facilities for hi-risk	• % of females ages 18 - 45 reporting binge drinking
Support effective transitions from (1) early childhood to school and (2) adolescence to adulthood	• Transition Services for youth with SHCN • CSHCN with Medical Home • CSHCN with Insurance • Children with insurance	• TBD
Reduce unintentional injury and promote healthy behavior choices for adolescents	• Motor vehicle deaths ages 10-14	• % of adolescents reporting no current use (in past 30 days) of either alcohol or illicit drugs.

Priority	Applicable National Measure	Draft State Measure
Improve data availability, access and analytical capacity	• (All measures)	• Possible composite
Expand medical home efforts to systems building and securing access & funding for children and youth	• CYSHCN with insurance • Transition Services for youth with SHCN • Children with insurance	• % of children whose parents report having 1 or more persons they think of as the child's personal doctor or nurse
Support reproductive and sexual health by improving access to education and services	• Teen Births ages 15-17	• % of pregnancies among women age 18 and over that are intended

Figure #1 Population Priority Concepts

Access	Educating about brain development	Medical Home
Access for immigrants	Eliminating disparities among different ethnic/racial and income groups	Mental health aggravated by homelessness
Access for teenagers	Emergency Preparedness	Mental health for youth
Access to culturally appropriate care	Exclusivity and early breastfeeding	Motor vehicle fatality
Access to family support	Expand catastrophic illness relief fund	Nutrition standards
Access to health care for children	Extension of EIPP to rural communities	Preconception care
Access to health resources in schools	Family planning	Pregnancy in racially stigmatized environments
Access to long acting contraceptives	Fertility treatment effects: short term and long-term	Pregnant women with sub. use issues
Access to primary care	Focus on fathers	Pregnant women's oral health
Access to WIC	Focus on vulnerable populations	Preschool years - develop system to support kids healthy behaviors
Adequate health coverage and access	Genetic testing	Preventive health care
Adolescent sports injury	Gestational diabetes during pregnancy	Putting prevention into all programs
Adolescent unintentional injury – motor vehicle, TBI, falls of 1-4 yr olds	Health care transitions	Racial disparities in infant mortality outcomes
Antiviolence work	Health insurance for immigrant children	Reducing norms around violence of men against others
Asthma prevention and control	Hearing loss for children	Respite care
Autism	High weight gain in pregnancy	Risky behaviors: kids who are high-risk
Autism spectrum disorders	HIV screening for pregnant women	Safe home
Automobile and focus on seatbelts, texting	Homelessness as a public health crisis	Safe sleep for infants <1
Avoiding prenatal care due to addiction	Hygiene promotion	School based health centers
Behavior in children	Identifying a systematic approach to identifying those at high(er)risk	Schools covering spending for chronic disease
Better understanding of preconception risk	Impact of economic downturn on providers	Screening for violence
Breast friendly hospitals	Impact of Health Reform – Access to Care	Sexual dating violence
Breastfeeding promotion	Impact of prematurity on birth outcomes and the family	Sexual health
Breastfeeding promotion	Impact of technology on health and risky behaviors	Sexual violence prevention for CYSHCN
Building safer communities	Improving pregnancy outcomes	Shaken baby syndrome
Bullying	Improving transportation	STDs
Care coordination	Increase educational opportunities for youth	Strengthening adolescent services
Cesarean and late pre-term births	Increased diversity and older age at first birth	Substance abuse for youth
Child fatality review	Infant mortality	Suffocation of infants
Child obesity	Infrastructure in rural communities	Suicide prevention
Children's chronic disease	Interaction of abortion and obesity/diabetes	Support for gay, lesbian, and transgender youth in schools
Children's oral health	Interconception care	Surrogacy and how this affects data collection/reporting
Concerted policy approach to obesity	Inter-pregnancy interval	Teaching parents how to be parents esp. given the loss of extended family
CSHCN: continual need for ongoing, coordinated care	Learning disabilities	Teenage driving deaths
Delaying age of first use in alcohol	Life transition - childhood to adulthood	Teenage pregnancy
Delaying the age of 1st use of tobacco	Life transition - school to adulthood	The effect of parental substance abuse
Developing systems to follow-up kids after age 3	Life transition - school to school	Transitions/Leveraging universal coverage
Developmental disabilities	Life transitions - EI to school	Trauma involved care
Disparities across all programs	Life transitions - pediatric to adult	Unintentional injury prevention
Disparities for people with disabilities	Maternal chronic disease	Universal home visiting for pregnant women
Domestic violence especially with intact families living in transition	Maternal drug overdose and infant drug exposure	Unplanned pregnancy in young adults
Drowning of 1-4 year olds	Maternal health	Violence screening in reproductive health
Early abnormal weight gain patterns	Maternal infant mental health	Wellness of those that go into workplace right out of high school
Early childhood mental health	Maternal mental health and infant bonding	Youth health promotion
Early entry into prenatal care	Maternal mental health screenings	Youth violence prevention
Early referrals to appropriate programs		

Figure #2 Infrastructure Capacity Concepts

Accurate, up-to-date information dissemination	Improved public relations
Additional training for staff on how to work with CYSHCN	Improved resources for data collection
Asset mapping	Improving DPH branding
Better communication and transparency among regional and central agencies/coalitions	Improving integration of services with oral health
Better coordination to share data	Improving outreach
Better coordination with EEC	Improving translations of public health messages
Better data for programs that do not have good systems	Improving ways to share data
Better data sources	Improving website
Branding other programs around EI	Increasing awareness and use of data
Bring state hospitals into the MDPH communication loop.	Increasing capacity
Building collaborative relationships with providers and communities	Increasing data capacity: geocoding could be possible if registry had more resources
Building database of external stakeholders	Increasing qualitative data collection
Bureaus should meet more to share priorities	Increasing/strengthening collaboration between DPH and partners
Capacity for local data collection and use	Infrastructure programs in general need support
Changing image of WIC from formula supplier to breastfeeding support	Instituting random internal audit process
Clarifying restrictions on social networking sites	Integrating better information re: social determinants
Community support line	Interagency coordination with the family centric approach
Connecting with Health Care Reform to promote focus on public health	Keeping data updated
Consistency of funding, so that we can continue sustainability	Linking data esp. WIC to PELL
Continuing to educate staff	Local commitment and cross-community sharing
Continuous quality improvement, accountability, and monitoring	Making website more consumer friendly
Coordinated data system to facilitate access to services	Market WIC as nutrition instead of as a hunger/food program
Coordinating with business leaders	Maximizing use of existing data since resources are scarce
Coordinating with community leaders	More collaboration across programs
Cross-collaboration DMH/DPH	More collaboration on training
Cross-utilization of resources to increase the efficiency of spreading the message	More culturally competent outreach staff
Curbing loss of providers	More culture competency
Data collection by YHS, YRBS strengthened	More epidemiologists
Data in a digestible format for communities to use	More funding for marketing
Data sharing to track cases longitudinally	More funding for workers/agencies, and
Data system linkage	More funds for computers and programs at DPH
Data system streamlining	More outreach to diverse families
Developing and working with public transit systems	More scientific/clinical experts available to assist staff and the Advisory Committee
Developing PELL as an ongoing resource	More state funding for PSAs
Direct, radio based marketing to Spanish communities	Multi-language access to web based information
Electronic birth certificates	Need more funding for marketing
Electronic Medical Records	Need to introduce more social networking
Engage community through providers	New technology for marketing
Engaging public to increase awareness of role/scope of public health	Improve science base on the prevention side
Epidemiology support	Program reviews based on client satisfaction
Evaluation capacity	Recording medication data
Expanding and strengthening school health	Reducing siloed structure and sharing
F.O.R. Families data system	Resources for any form of training, marketing or outreach
Family to family support	Services must be family centered for all programs
File linkage	Simplifying editing of the website
Getting access to Medicaid data	Transparency & communication of information